

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 4-8, 10, 16, 18 and 19 are pending in the present application. By this Amendment claims 1 and 17 are canceled without prejudice, claim 18 is amended, and claim 19 is added. No new matter is involved.

Personal Interview

Applicant acknowledges with appreciation the courtesies extended by Examiner Ram N. Kackar to their representative, Robert J. Webster, Reg. No. 46,472 during the personal interview conducted on August 19, 2010. During that interview, Applicant's representative discussed possible amended claims and arguments to the effect that those possible claim amendments result in claims which patentably define over the applied art. No agreement was reached concerning patentable subject matter.

Rejection under 35 U.S.C. § 103

In the Outstanding Office Action, claims 4-8, 10, 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Patent 5,589,224 to Tepman et al. ("Tepman"). This rejection is respectfully traversed.

Claim 18, as amended, recites a vacuum deposition apparatus having a process chamber, comprising: a susceptor having a recessed central portion provided with lift pins and raised perimeter portions for heating a glass or quartz substrate, each raised perimeter portion of the

susceptor acting as a sliding portion on which to slide the glass or quartz substrate toward a stopped position by stopping pins placed on the sliding portion without incurring contact of the glass or quartz substrate with a build up of vacuum deposited material on the raised perimeter portions of the susceptor; means for positioning the glass or quartz substrate into contact with the susceptor at a non-parallel angle to a top surface of the susceptor and for permitting edges of the glass or quartz substrate to slide along a raised perimeter portion of the susceptor toward stopping pins until the glass or quartz substrate is substantially parallel with the susceptor; wherein each raised perimeter portion of the susceptor includes a groove at a location of the stopping pins to receive vacuum deposited material and thereby minimize formation by the vacuum deposited material of a film on the raised perimeter portion of the susceptor, and wherein a length of said raised perimeter portion, measured from a stopper pin to a contact position of the glass or quartz substrate on the top surface of the susceptor is about 10 mm to stabilize transfer of the glass or quartz substrate to the susceptor.

Applicant's disclosed conventional art susceptor does not include any groove and does not contain a disclosure of how to improve stable transfer of the glass or quartz substrate to a susceptor, although Applicant does disclose that the conventional art apparatus causes a "slide miss" such that the glass substrate 4 is broken due to a severe bend of the glass substrate.

Applicant's claimed invention is directed to a vacuum deposition apparatus which results in a stable transfer of glass or quartz substrates due to slide misses. The claimed invention includes not only a groove in which to receive vacuum deposited material that can accumulate on a susceptor, but also provides an improved raised perimeter slide portion of the susceptor having a length feature which is neither disclosed nor suggested by the applied art.

While Tepman, the secondary reference used in the rejection, discloses a groove 520 which is used to permit additional buildup of deposited material relative to the planar configuration along the edge of substrate 14 without the material sticking to the substrate and without interfering with the positioning and orientation of the substrate on the pedestal 504, and shows centering pins 518 in the groove (col. 7, lines 36-51), Applicant cannot find any disclosure in Tepman wherein a length of said raised perimeter portion, measured from a stopper pin to a contact position of the glass or quartz substrate on the top surface of the susceptor is about 10 mm to stabilize transfer of the glass or quartz substrate to the susceptor, as claimed.

Applicant also cannot find any disclosure in Dubois wherein a length of said raised perimeter portion, measured from a stopper pin to a contact position of the glass or quartz substrate on the top surface of the susceptor is about 10 mm to stabilize transfer of the glass or quartz substrate to the susceptor, as claimed. Dubois merely discloses providing a groove 44, one of the purposes of which is to receive deposition which would otherwise build up at the edge of a wafer (col. 4, lines 43-48).

Thus, even if one of ordinary skill in the art were properly motivated to modify Applicant's disclosed convention art in view of Tepman or Dubois, the so-modified version of Applicant's disclosed convention art would still not meet, suggest, or otherwise render obvious the claimed invention.

The outstanding Office Action also relies on a statement by the Court in *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984) to the effect that, where the only difference between the prior art and the claims was a relative dimension of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior

art device, the claimed device was not patentably distinct from the prior art device. However, that statement does not apply to the facts of this case, where the sliding features of the prior art result in an unstable transfer of the glass or quartz substrates to the susceptor. Thus, the claimed invention clearly differs from the applied art.

In reply to this argument, the Office Action indicates that Applicant's admitted prior art (AAPA) discloses a sliding dimension of 5mm and, according to the specification, it could be 3-10 mm for proper operation.

In response, Applicant respectfully submits that paragraph [0019] of Applicant's specification, which deals with the conventional art, discloses that “. . .the robot arm 8 puts the glass substrate 4 2~3 mm before a stopper pin 28 from the end of the glass substrate 4. At this time, it becomes unstable upon the transfer and the conveyance of the robot arm 8 because the gap of the stopper pin 28 and a slide part where the glass substrate 4 is safely placed, is 5 mm.”

Thus, the conventional art portion of Applicant's specification is limited to a disclosure of a gap between the stopper pin and a slide part where the glass substrate is placed at 2 to 5 mm, and Applicant discloses that this results in an unstable transfer. **It is important to note that only Applicant discloses the problem with the prior art, and Applicant's disclosure of this problem cannot be used against Applicant. Moreover, only Applicant proposes a solution to this problem, and then only as his invention.**

Only when one teaches paragraph [0027], which discusses Applicant's invention, is the 10 mm gap, that solves the unstable transfer problem disclosed. The solution to the unstable transfer problem is clearly not part of Applicant's disclosed conventional art, nor does the

conventional art disclosed by Applicant include an indication that the length of the sliding area is a result-effective variable at all, let alone to solve unstable transfer of a substrate to a susceptor.

In this regard, it is a fundamental principle of patent law that an Applicant's disclosure of its invention cannot be used against the Applicant, because this is impermissible reconstruction of Applicant's invention based solely on Applicant's disclosure. Obviousness can not be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). As discussed in Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed.Cir.1985), it is the prior art itself, and not the Applicant's achievement, that must establish the obviousness of the combination.

Yet, the outstanding Office Action is improperly attempting to do just this, by indicating that Applicant's specification in paragraph [0028] of the published application suggests that the distance in the claimed invention is 3-10 mm.

Applicant respectfully submits that the only disclosure of dimensioning the gap between where the substrate is placed on the susceptor sliding part and the stopper pins so as to achieve a stable transfer of the substrate to the susceptor is in the portion of the disclosure that concerns Applicant's invention and not in the portion of the disclosure directed to the conventional art.

Furthermore, to characterize the claimed invention as being in the nature of obvious adjustments because it would result in a predictable benefit is not based on Applicant's disclosure of conventional art in the sense that only Applicant discloses, in this application, the unstable transfer aspect of the conventional art, and this disclosure cannot properly be used against Applicant because the "conventional art" shown in Applicant's drawings, as originally filed, does not disclose this problem. Nor does Applicant make a clear, unmistakable and

unequivocal admission in this application that the unstable transfer characteristic was known in the art, or that varying the length of the sliding area was a result-effective variable.

In this regard, Applicant notes that, as pointed out in *Fleming v. Giesa*, 13 USPQ2d 1052 (BdPatApp&Int), for an admission to be used against a party, it must be clear, unequivocal, and unmistakable. See also, *Harner et al. v. Barron et al.*, 215 USPQ 743 (Comr Pats 1981), *Suh v. Hoefle*, 23 USPQ2d 1321 (BdPatApp&Int), *Issidorides v. Ley*, 4 USPQ2d 1854 (BdPatApp&Int), and *Ex parte The Successor In Interest Of Robert S. McGaughey*, 6 USPQ2d 1334 (BdPatApp&Int).

Applicant also makes reference to the slides filed in this application on June 12, 2009, which have been discussed with Examiner Kackar, and which show that ends of the heated substrate 4 are bending. Applicant notes that when a substrate with bent ends is placed in contact with a susceptor 10, the ends tend to straighten out and slide along the top surface of the susceptor with respect to which the ends of the heated substrate come into contact. No disclosure of this feature is found in the conventional art, as disclosed in this application as originally filed. Accordingly, the disclosure of Fig. 6 cannot be properly used against Applicant to render the claimed invention obvious. Only Applicant, as part of disclosing his invention, indicates that the transfer of the heated substrate to become unstable due to the length of the gap feature recited in the claims, and this disclosure cannot properly be used against Applicant.

Accordingly, it is respectfully submitted that the Office Action fails to make out a *prima facie* case of obviousness of the invention recited in independent claim 18, and in the claims dependent thereupon, including claims 4-8, 10 and 16.

Reconsideration and withdrawal of this rejection of claims 4-8, 10, 16 and 18 are

respectfully requested.

Claims 4-8, 10, 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of U.S. Patent 5,855,697 to DuBois. This rejection is respectfully traversed. As noted above, the conventional art discussed in Applicant's specification does not disclose what the Office Action concludes that it does disclose.

Applicant's disclosure of conventional art is limited to a disclosure of a gap between the stopper pin and a slide part where the glass substrate is placed of 2 to 5 mm, and Applicant discloses that this results in an unstable transfer.

Only when one reaches paragraph [0027], which discusses Applicant's invention, is the 10 mm gap, that solves the unstable transfer problem, disclosed.

It is a fundamental principle of patent law that an Applicant's disclosure of its invention cannot be used against the Applicant, because this is impermissible reconstruction of Applicant's invention based solely on Applicant's disclosure.

Yet, the outstanding Office Action is improperly attempting to do just this, by mischaracterizing Applicant's disclosed invention as admitted prior art.

Applicant respectfully submits that the only disclosure of dimensioning the gap between where the substrate is placed on the susceptor sliding part and the stopper pins so as to achieve a stable transfer of a heated substrate to the susceptor is found in Applicant's disclosure of his invention, and not in any of the applied art.

To characterize the claimed invention as being in the nature of obvious adjustments because it would result in a predictable benefit is based on the unsupported by any objective factual evidence and, at best, is unwarranted speculation.

Applicant respectfully submits that it is well settled that a rejection under 35 U.S.C. § 103 cannot properly be based on speculation but must be based on objective factual evidence of record. See, *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). See, also, *In re GPAC Inc.*, 35 USPQ2d 1116 at 1123 (Fed. Cir. 1995) and *Ex parte Haymond*, 41 USPQ2d 1217 at 1220 (Bd. Pat. App. & Int. 1996).

DuBois does not disclose the claimed gap feature, either.

Thus, no matter how these disclosures are combined, they cannot possibly disclose, suggest, or otherwise render obvious the claimed invention.

Accordingly, it is respectfully submitted that the Office Action fails to make out a *prima facie* case of obviousness of the invention recited in independent claim 18, and in the claims dependent thereupon, including claims 4-8, 10, 16 and 18.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 4 stands rejected under 35 U.S.C. § 103(a) over AAPA in view of Tepman or alternatively, in view of DuBois, and further in view of U.S. Patent 5,119,761 to Nakata. This rejection is respectfully traversed.

The shortcomings of the AAPA and Tepman and Dubois references, as applied above, are discussed above.

Nakata is not applied to remedy the aforementioned shortcomings of AAPA, Tepman or DuBois, so no matter how this reference is applied to AAPA (modified by either Tepman or DuBois), the so-modified version of AAPA-Tepman or of AAPA-DuBois cannot possibly

disclose, suggest, or otherwise render obvious, the claimed invention.

Accordingly, it is respectfully submitted that the Office Action fails to make out a *prima facie* case of obviousness of the invention recited in independent claim 18, and in dependent claim 4.

Reconsideration and withdrawal of this rejection of claim 4 are respectfully requested.

New Claim 19

New claim 19 is a method claim which recites a method of stabilizing transfer of a glass or quartz substrate to a susceptor for heating the glass or quartz substrate by making a length of said raised perimeter portion, measured from a stopper pin to a contact position of the glass or quartz substrate on the top surface of the susceptor to be about 10mm to stabilize the transfer of the glass or quartz substrate to the susceptor.

None of the applied art, including what Applicant describes as conventional, or otherwise, discloses or suggests such a method.

Accordingly, claim 19 patentably defines over the applied art.

Thus, consideration and allowance of claim 19 are respectfully requested.

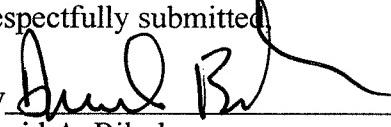
CONCLUSION

All rejections raised in the Office Action having been traversed, and a new claim, which appears to define over the applied art, has been presented. It is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Robert J. Webster (Reg. No. 46, 472) at 703-205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: September 7, 2010

Respectfully submitted

By 

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